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ABSTRACT

This paper examines e-learning, with particular focus on the new education businesses that are redefining and reshaping the experience of becoming educated. The unique role played by for-profit businesses in developing and expanding the learning opportunities for children in K-12 schools through the design and delivery of e-learning experiences is explored. The first section identifies opportunities and challenges of e-learning. The second section addresses the role of the private sector. The third section identifies the differences between traditional and online learning and describes several e-learning products and services, including portals, content providers, community sites, tutoring, student information systems, and distance learning. The fourth section presents snapshots of the following e-learning businesses: Lightspan, Inc.; Classroom Connect; HighWired.com; Tutor.com; PowerSchool, Inc.; and Class.com, Inc. It is concluded that e-learning can play a substantive role in developing a new breed of literate citizens for the global economy of the 21st century. (MES)

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E-LEARNING:
EDUCATION BUSINESSES TRANSFORM SCHOOLING

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INTRODUCTION

"The purpose of education in this society
is to bring the kids up to be conversant with the most important ideas
and the representation systems that are used to express them."
– Alan Kay, Apple Computer

Recently, "education" has risen to the top of the charts in public opinion polls. During the late 1990s, growing numbers of state and local election campaigns were waged almost entirely on the back of "education reform." As a result, state and local authorities are now vigorously experimenting with innovative educational programs: vouchers, charter schools, and standardized tests. The fact that so much attention is being paid to matters of educational outcomes, opportunity and equity is – undoubtedly – a good thing. But as growing numbers of people turn their attention to these matters, a seemingly intractable debate ensues over what good education is really about: test scores, "back to basics" or choice.

As a former educator, and as someone who has been both personally and professionally focused on exploring the value and impact of education, I have my own opinions about these matters. And I'm inclined to believe that many of these debates miss the point by a wide mark.

Very broadly, the mission of education is to develop literate citizens. Students need to be schooled not only in alphabetic and numeric literacy, but also to develop a fluent understanding of the history of ideas. More than that, students must strive to become fluent in the ideas of their own time – what in the eighteenth century was referred to as "the spirit of the age." To succeed in becoming fluent in these ideas, learners must – as Apple Computer's Alan Kay suggests – understand and be able to manipulate the systems of representation that bring them to life. And to do that, learners must be social creatures, because learning only takes place when there is an exchange of ideas.

Today when people talk about education, the conversation frequently turns to a new type of education called "e-learning," as well as to the new breed of entrepreneurial Internet businesses making this kind of education possible. Like everything else associated with the Internet, the term e-learning is subject to much mystification and hype. Nevertheless, to talk about e-learning is really still to be talking about literacy, albeit a new kind – a literate understanding of the ideas of a time characterized by new cultural dynamics: globalization, "the new economy," and the web. It is also to talk about a new form of social interaction.

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What is e-learning? It is a means of becoming literate, involving new mechanisms for communication: computer networks, multimedia, content portals, search engines, electronic libraries, distance learning, and web-enabled classrooms. E-learning is characterized by speed, technological transformation and mediated human interactions. The success of e-learning programs will depend upon the capacity of schools, parents, children and education businesses to collaborate effectively – simultaneously connecting learners, educators and the community on a global scale, and forcing us to rethink the purpose and architecture of our educational infrastructures in very fundamental ways. E-learning will not replace the classroom, but it has the potential to change the purpose and function of the classroom considerably. E-learning offers us new ways to think about designing and delivering education – not just between the ages of 5 and 18, but across the lifetime.

If there is a mandate to rethink the relationship between education and technology, it is not because technology – by itself – makes people smarter. Anyone who presents such an argument is simply hawking "the new new thing." The real reason to rethink education around the question of technology is that the technology is here – and it is embedded in our lives: in our appliances, our communications systems and our transportation systems. It is not going to go away. As a result, we simply cannot enjoy all of the opportunities afforded us in this new cultural moment unless we are literate in the ideas of our time and the technologies used to express them.

This paper examines the opportunities and challenges associated with e-learning, with particular focus on the new education businesses that are redefining and reshaping the experience of becoming educated. Companies such as Lightspan, eScore.com, Classroom Connect, PowerSchool, and Class.com are mining deep, new veins of educational opportunity. In various ways, these for-profit businesses play a very considerable role in making e-learning possible for our public and private institutions of learning. In some cases, these businesses have begun to compete directly with schools – offering, for example, a complete high school education online. The purpose of this paper is to explore the unique role played by these for-profit businesses in developing and expanding the learning opportunities for children in K-12 schools through the design and delivery of e-learning experiences.

Opportunities and Challenges

Connectivity, content, community. These are the buzzwords of the new education landscape – and it is a global landscape. Today, social, technological, and economic drivers are transforming education systems around the world. As the Internet brings these individuals, cultures and nations together in unprecedented ways, matters of education reform are pushed center-stage. As local economies turn global, the development of a technologically skilled workforce becomes a worldwide concern; and as human capital becomes the chief source of economic value, education and training become lifelong endeavors for the majority of workers. E-learning offers these individuals a potentially less expensive and more convenient way of becoming educated – and of coming into contact with a more diverse group of fellow learners than ever before.

The capacity for e-learning to make a really significant contribution to education in the U.S. and around the world, however, remains uncertain. There are many challenges to be faced if e-learning programs are to be successful. In the U.S., the vast majority of teachers report feeling under-prepared to use technology in the classroom. While the federal government's e-rate program has done much to wire our nation's public K-12 schools, a great deal of work remains to be done: many classrooms still do not have phone lines and the Internet, therefore, remains largely inaccessible for many students. At the same time, the much talked about pedagogical benefits of rich multimedia educational materials will not be realized until bandwidth issues are

adequately addressed. Because wiring and cabling are expensive both to install and maintain, some schools have chosen to wait until wireless systems become widely available – but this strategy defers the benefits of e-learning and results in some students being disadvantaged. There are also significant costs associated with keeping school computers and network infrastructures up to date – and these products and services will have to become more affordable, perhaps through leasing rather than purchasing options, if schools are going to keep up with and benefit from the most recent technological innovations. Surrounding all these issues is the much broader challenge of providing equitable e-learning opportunities across communities – wealthy and poor alike.

Certainly these challenges will not be overcome without much effort, but there are many reasons for working to overcome them. E-learning represents a long-term opportunity for us to rethink the value of education over the lifetime, as well as its place in our lives. It can also help us to develop the "knowledge workers" required to sustain the growth of the new economy. E-learning is, after all, well positioned to familiarize individuals with the tools of the modern workplace. It also promises to reach and empower greater numbers of learners than brick and mortar institutions have been able to accommodate.

In short, e-learning has the capacity to put more diverse learning resources at the fingertips of students than ever before, while simultaneously connecting them with an increasingly global education community. Moreover, because of the mobility that is characteristic of e-learning, it can become embedded in many daily activities, and this has the potential to reshape our understanding of the time and place for learning in our lives. In the accelerated new economy, knowledge workers are frequently called upon to add to new skillsets. E-learning has the capacity, as Merrill Lynch analyst Michael Moe has said, to replace "just-in-case" learning with "just-in-time" learning.

Of course the success of e-learning initiatives will depend upon the contributions of diverse groups of people: teachers; administrators; families; federal, state and local governments; and the private sector – the education entrepreneurs who are building the new educational infrastructure, designing new educational content and developing new educational tools, as well as the private investors who help make these businesses possible.

THE ROLE OF THE PRIVATE SECTOR

Although we may take public education for granted today, things haven't always been as they are now. And some education reformers warn that things may change yet again. As Andrew Coulson's 1999 book, *Market Education: The Unknown History*, makes clear, our school systems have gone from private to public and – occasionally – back again over many decades. Of course, today, 80% of our K-12 institutions are federally supported public schools – and the dramatic growth in the number of charter schools in recent years suggests that the American people are by and large comfortable with publicly funded education provided it continues to innovate. And there is evidence that, contrary to the views of some proponents of education reform, the federal government is interested in innovation as well. One of the more recent and perhaps most significant attempts at rethinking public education originated, in fact, with the federal government.

A Nation at Risk, a federal report published in 1983, served as an important wake up call to the education establishment. Student performance was seen to be declining vis-à-vis much of the

industrialized world, the report warned, and left unchecked this would negatively impact the long-term health of the U.S. economy, as well as individuals' earning power. In response, the private sector began to take an increasingly active role in education debates. Yet the solutions offered by top business leaders – generally in the guise of corporate philanthropy – failed to have a significant impact on student outcomes.

By the early 1990s, however, the pace of change was accelerating. The public began engaging with educational issues with renewed interest. At the same time, technology in the form of word processors and computerized library catalogues became ever more commonplace in our schools and universities. By mid-decade, the Internet had made a significant impact on academic communications – with email taking the education community by storm. A year or two later, the World Wide Web introduced educators and students alike to linked documents hosted on computer servers all around the world. Perhaps most importantly, education entrepreneurs began playing more significant roles in the development and delivery of education and training programs.

Today, the "education industry" – encompassing businesses as diverse as childcare companies, for-profit schools, publishers, school supply companies, corporate training firms, tutoring and test preparation businesses, and, more recently, Internet education businesses – generates nearly $100 billion in revenue annually. The notion that business and education can do important work together is now widely accepted, from Wall Street to Main Street.

Investors are pouring ever larger sums of startup capital into education businesses. Research conducted by Eduventures.com, an education industry market research firm, shows that during the 1990s education businesses received some $6 billion in private equity investments – with $2.6 billion coming during 1999 alone. Internet education businesses are receiving a greater and greater share of the investment pie. In 1997, e-learning companies took 18%, or $81 million, of a total $447 million of private investments. The following year, e-learning's share rose to 25%, taking $198 million of 1998's total $793 million. By 1999, these companies were taking 38%, amounting to $981 million of the $2.6 billion total. During the first five months of 2000, the share for e-learning private investment reached 57%, amounting to $841 million of the $1.5 billion invested.

All major investment firms cover the education industry, from Merrill Lynch to Salomon Smith Barney, from Credit Suisse First Boston to Banc of America. Today investment firms produce two-inch-thick research books on investment opportunities in education, and a number of firms now publish weekly newsletters – all focused on e-learning – to keep investors up to date on opportunities in an accelerating marketplace.

At the same time, investors as diverse as Warburg Pincus, Lazard Freres, GE Equity, Leeds Equity Advisors, Forstmann Little, New Schools Ventures Fund, and others have devoted sizable sums of capital to support the growth of education businesses. Now, a number of the industry's most successful firms – including Knowledge Universe, Sylvan Learning Systems, and Kaplan – have created funds of their own to reinvest in the industry they helped create.

Earlier this year Harvard University launched the David T. Kearns Program on Business, Government and Education to explore ways in which businesses can improve education in the U.S. through cooperation with government and education institutions. Clearly the business of education is on the map, and indications point to enormous opportunities for investors, entrepreneurs and educators in the coming years. Late last year John Chambers, CEO of Cisco

Systems, called Internet education the next "killer app" – one that would make the pervasiveness of email look like "a rounding error."

As an experienced observer of both the for-profit and non-profit activities within the education community, Eduventures.com believes that education entrepreneurs will play a very significant role as agents of change in 21st Century reform efforts. One of the great strengths of entrepreneurship is that it cuts across public, private and non-profit lines. Today, education executives, investors and educators are working side by side to initiate change in entrepreneurial ways. In many respects, education is the last sector of the economy to benefit from the levels of innovation, efficiency and accountability common to the business world. For that reason, education businesses have much to offer the education community – but they also have much to learn from their institutional partners about successfully porting the classroom to the web. In the coming decade, education entrepreneurs – both on the for-profit and non-profit sides – will play a leading role in shaping the future of e-learning markets.

THE E-LEARNING MARKETPLACE

By harnessing the power of e-learning, education businesses have the capacity to transform schooling in many ways. For students and teachers, e-learning offers access to a broad array of content and commentary, interactive self-paced learning tools, a vast community of learners, and distance learning opportunities – very nearly a "classroom without walls." Done well, the net effect of e-learning programs should be a genuine transformation in the way children learn – as well as when they learn and why they learn.

Classroom Learning	E-Learning
• Textbooks and reading lists	• Content portals and online resources
• Chalk and talk	• Rich multimedia & interactive content
• Class discussion	• Inter-classroom collaboration online
• Help after class	• Web-based tutoring on demand
• Quarterly report cards	• Real-time student information systems (SIS)
• On school grounds	• Multiple locations

These differences between traditional and online learning should underscore the ways in which e-learning businesses make contact with educators, students and parents on a number of distinct fronts. There are many niches in the e-learning marketplace – and a variety of products and services.

- **Portals** – Web sites that aggregate educational content, lesson plans and other resources online. These sites generally feature powerful search engines for researching on the web, as well as content and other materials provided by partner companies such as publishers, associations and online news sources. Access to content is often made available at no charge to the user. Revenues are typically generated though a blend of advertising, e-commerce and subscription sales. Examples: Lightspan; EdGate.com.

- **Content Providers** – Education sites and software companies which typically focus on branding a curriculum in a specific discipline, such as math or science. These firms, like portals, may derive revenue from advertising and e-commerce, as well as through the sale or licensing of curriculum in the form of printed materials or CD-ROMs. Examples: Classroom Connect; Cogito Learning Media.

- **Community Sites** – Companies which provide schools, classrooms or student clubs with online publishing tools and communication features such as chatrooms, message boards or email. Tools and server space are frequently made available to users at no charge. For revenue generation, these companies rely on advertising and e-commerce. Recent market trends suggest that these businesses will increasingly look to broaden their offerings to include data management tools such as administrative and student information systems. Examples: HighWired.com; FamilyEducation Company.

- **Tutoring** – Frequently these firms have already established brick and mortar tutoring or test preparation businesses. By bringing their services online, these companies make it possible for parents – who typically pay for these services – to participate in and actively support their children's education. Students benefit by being able to access help whenever and wherever it is needed. Revenues are typically derived from fees for services or through subscription sales. Examples: Tutor.com; eScore.com.

- **Student Information Systems** – These companies make it possible for teachers, parents and students to interact with greater frequency and efficiency by making student records – such as grades or attendance data – and class projects available online. Some SIS solutions provide parents with email access to teachers. Revenues are generated through the sale of these systems – whether web-based or software – to schools. Examples: PowerSchool; NCS.

- **Distance Learning** – In the K-12 market, these companies generally take education out of the classroom and into the home – or any number of other locations. (In the higher education marketplace, these firms also market their services for use on campus.) Distance learning firms in the K-12 space target the home-schooling market and also license their services to brick and mortar schools which may not have the resources in-house to deliver certain kinds of content – such as advanced placement courses. Distance learning companies challenge schools to rethink the purpose of the classroom and have the potential to bring quality, interactive education to disabled children who could not otherwise attend school. Revenues are generated through the sale of services to parents or schools. Examples: Class.com; Apex Learning.

Because of rapid technological advances and swiftly evolving market dynamics, these companies may change strategies, revenue models and product offerings quickly and frequently. The e-learning market is also undergoing consolidation – with companies merging or acquiring complementary businesses – and this trend may well accelerate. All this can make it difficult for faculty and administrators to identify for-profit partners who can be counted on to work and grow with them over the long-haul. But this also means that e-learning companies must innovate and build better and easier-to-use products to successfully compete in the marketplace.

SNAPSHOTS OF SELECT E-LEARNING BUSINESSES

The e-learning market is moving rapidly toward consolidation, as portals and community sites partner with or acquire tutoring and SIS businesses, and as content providers and distance learning companies partner or merge to provide a broader array of products and services. What is today a very fragmented marketplace composed of niche players, could in 12 to 24 months be dominated by a handful of large companies providing a full menu of products and services that encompass not only the needs of the K-12 marketplace, but also higher education, corporate training and professional development markets. This means that e-learning markets two years from now may look very different than they do today. As the marketplace consolidates, some of the companies described below may not continue to operate as standalone businesses, but these leading and emerging firms look set to play a significant role in the evolution of e-learning.

- **Lightspan, Inc.**, San Diego, CA (NASDAQ: LSPN) – The portal company provides K-12 and postsecondary educators, parents and students with instructional services that aim to improve student learning by creating links between home and school. Originally a computer hardware and software distributor, the company has shifted its focus to become an online education portal. Lightspan has created a collection of products and services including interactive CD-ROMs, electronic tools, print materials, and Internet services that are designed to increase student interest in learning and parental involvement in education, improve educational equity and increase interaction between parents, teachers, and students. Visit www.lightspan.com.

- **Classroom Connect**, Foster City, CA (Private) – The content provider develops web-based curriculum products and professional development programs for the K-12 market. The company's three principal products – Classroom Today, Connected University and Quest Interactive Expeditions – offer classroom course content, technology training for teachers and "virtual explorations" online respectively. Classroom Connect partners include the American Museum of Natural History, Discovery Channel School, the New York Times Learning Network, and others. Visit www.classroom.com.

- **HighWired.com**, Watertown, MA (Private) – The community site has provided more than 11,000 of the nation's 20,000 high schools with free tools and server space to place their classrooms, school newspapers, sports teams, clubs and guidance programs online. The firm is now looking to extend its relationships with these institutions by providing school-wide web sites that are intended to bring together in more powerful ways the faculty and students already using the company's products on their own. The company recently raised $30 million in private equity financing. Visit www.highwired.com.

- **Tutor.com**, New York, NY (Private) – The tutoring business is one of a new breed of Internet companies variously referred to as "digital marketplaces," "eMarketplaces," or "Internet exchanges." Like eBay, Tutor.com brings together many buyers and sellers and allows them to conduct transactions online. The site aims to provide parents and students with the opportunity to locate tutors, purchase instructional products and services, and get tutoring online via digital white board. Tutor.com also enables individual tutors to market their services to a broad audience. The company's web site features a database of tutors in a wide range of subject areas. Parents or students can query the database by subject, zip code and price. Tutor.com's partners include The Princeton Review, HighWired.com, the NEA, Blackboard and others. Visit www.tutor.com.

- **PowerSchool, Inc.**, Folsom, CA (Private) – The student information systems company provides K-12 schools with web-based solutions that feature real-time information systems, assessment tools and access to online educational resources. The company's products and services are designed to connect students, teachers, administrators and parents more effectively through the web. Teachers can record student grades electronically, and parents can review grades and attendance records on the web. The company recently secured $31 million in private equity financing. Visit www.powerschool.com.

- **Class.com, Inc.**, Lincoln, NE (Private) – The distance learning company offers education over the Internet to students and learners around the world. The company recently launched a program designed to provide a complete high school diploma online. The Class.com program uses a variety of technologies to maximize student learning through the use of video, graphics, sound, and text on the web. Class.com is a for-profit subsidiary of the University of Nebraska. Visit www.class.com.

Collectively, these firms provide K-12 schools with unique competitive advantages – allowing them to provide a potentially richer, more engaging and student-centered education. En route, these e-learning providers help students to develop the skills they'll need to compete in a world that increasingly looks to technology to drive and sustain its economic growth.

CONCLUSION

Despite the opportunity and promise evident in the innovative e-learning ventures currently underway in the K-12 marketplace, it would be a mistake to regard online learning as an educational panacea. By itself, e-learning will not drive up student test scores, nor will it ensure educational equity for all learners. But e-learning businesses and their institutional partners are demonstrating the rich potential of web-based education. The significance and impact of these jointly developed programs is evident in the wide-ranging support they have received from parents, schools, entrepreneurs, investors and policy leaders.

It should also be evident from the brief survey provided here that the private sector can play an important and valuable role in bringing new levels of innovation, as well as significant capital resources, to the education community. One indicator of the power and attractiveness of private sector involvement in the development of e-learning products and services is the number of high-profile non-profit institutions looking to get into the entrepreneurial game. In the postsecondary market, prestigious institutions such as NYU, Columbia, Cornell and others are spinning off their own for-profit subsidiaries. Many other brand name postsecondary schools have partnered with for-profit providers such as Unext.com to distribute their course materials and programs overseas. For many reasons, the postsecondary market can afford to be more experimental than the K-12 market, but the launching of Class.com suggests that the distance separating these two markets may be diminishing. It may not be long before K-12 schools look to harness the resources of the private sector to develop their own for-profit products and services.

All of this suggests that the time to rethink the relation between corporate, government and education institutions is now. In many respects, distinctions between for-profit and non-profit enterprises are fading. Because e-learning represents a powerful convergence of technological opportunity and economic necessity, its emergence presents a unique occasion to undertake a

considered reevaluation of the role and function of education over the course of the lifetime. Working together, policy leaders, administrators, teachers, students, parents, education entrepreneurs and investors can realize the potential for e-learning to substantially improve and expand the learning opportunities for children in K-12 schools. The work accomplished so far suggests that e-learning can play a substantive role in developing a new breed of literate citizens for the global economy of the twenty-first century.

FURTHER READING

Armbruster, Rick with Tom Evans, Jackie Lyons and Ryan MacDonnell, *The Education Quarterly Investment Report: A Decade of Private Investment in Education*, Eduventures.com, January 2000.

Block, Howard and Brandon Dobell, *The E-Bang Theory*, Banc of America Securities, September 1999.

Cappelli, Gregory with Scott Wilson and Michael Husman, *E-Learning: Power for the Knowledge Economy*, Credit Suisse First Boston, March 2000.

Coulson, Andrew, *Market Education: The Unknown History*, Transaction Publishers, 1999.

Evans, Tom with Jackie Lyons, Adam Newman and Katherine Rynearson, *Trends and Drivers in the Education Industry: Markets & Opportunities 2000*, Eduventures.com, Spring 2000.

Moe, Michael with Kathleen Bailey and Rhoda Lau, *The Book of Knowledge*, Merrill Lynch, April 1999.

Peterson, Robert with Mark Marostica and Lisa Callahan, *E-Learning: Helping Investors Climb the E-Learning Curve*, U.S. Bancorp Piper Jaffray, November 1999.

Rivero, Victor, "Alan Kay: Interface with Meaning," *Converge*, September 1999, http://www.convergemag.com/Publications/CNVGSept99/IN%20CLOSE/INCLOSE/InClose.shtm

Stokes, Peter with William Stokes, "Pedagogy, Power, Politics: Literate Practice Online," *Computers & Texts No.13* (December 1996), http://info.ox.ac.uk/ctitext/publish/comtxt/ct13/stokes.html